

CryoEM for Medical Biology

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The establishment of a cryo-electron microscopy (cryo-EM) center at the Center for Soft Nanoscience represents a major milestone in the university's pursuit of advancing structural biology and fostering interdisciplinary research. Cryo-EM has become a pivotal technique for elucidating the structures of macromolecular complexes, shedding light on the molecular mechanisms underlying human diseases. This talk will delve into the principles and applications of single particle analysis and electron tomography, two complementary cryo-EM methods that enable nanoscale visualization and analysis of molecular structures and cellular organization. Through selected examples from our research, I will demonstrate the capabilities and potential of these techniques, highlighting their impact on our understanding of complex nanosystems and their far-reaching implications in biomedicine.